

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A compact thermal exchange device for thermo-electric cooling mode, the device comprising:

~~a thermal electric cooling unit formed around a center of the compact thermal exchange device;~~

a planar thermal electric cooling unit having an upper planar side and a lower planar side, comprising two planar plates in the thermal electric cooling unit, wherein each of the planar plates being formed is positioned on [[an]] the upper planar side and [[a]] the lower planar side of the unit, respectively;

two housing walls, each of the housing walls being ~~installed~~ positioned on the upper side and the lower side of the thermal electric cooling unit, respectively;

a plurality of heat pipes, wherein each of the plurality of heat pipes is directly inserted into positioned within a corresponding one of the planar plates, coplanar to the corresponding one of the planar plates, wherein a predetermined portion of each of the plurality of heat pipes extends laterally beyond the corresponding one of the planar plates;

a plurality of fins formed on the predetermined portion of the heat pipes;

an external fan provided over the fins; and

an internal fan provided under the fins.

2. (New) The compact thermal exchange device of Claim 1, wherein each of the plurality of heat pipes is positioned in the center of each of the planar plates.

3. (New) A compact thermal exchange device comprising:

a thermal electric cooling unit formed around a thermal exchange device, comprising  
a first planar plate, wherein the first planar plate is formed on a first plane, and a second  
planar plate, wherein the second planar plate is formed on a second plane positioned  
below the first plane;

a first housing wall positioned above the first plane;

a second housing wall positioned below the second plane;

a first heat pipe positioned within the first planar plate and extending laterally  
to the exterior of the housing;

a second heat pipe positioned within the second plate and extending laterally to  
the interior of the housing;

a first plurality of fins formed on the first heat pipe, the first plurality of fins  
extending radially from the first heat pipe; and

a second plurality of fins formed on the second heat pipe, the second plurality of  
fins extending radially from the second heat pipe.

4. (New) The thermal exchange device of Claim 3, further comprising an external  
fan formed on an upper side of the first plurality of fins.

5. (New) The thermal exchange device of Claim 4, wherein the external fan  
processes an outside air.

6. (New) The thermal exchange device of Claim 5, further comprising an internal  
fan formed on a lower side of the second plurality of fins.

7. (New) The thermal exchange device of Claim 6, wherein the internal fan  
processes the air within the housing wall.

8. (New) The thermal exchange device of Claim 3, wherein the first plurality of fins is a high-density fin stack.

9. (New) The thermal exchange device of Claim 3, wherein the second plurality of fins is a high-density fin stack.